3-Heights™ PDF Desktop Analysis & Repair Tool

Version 4.5

User Manual

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1 Introduction

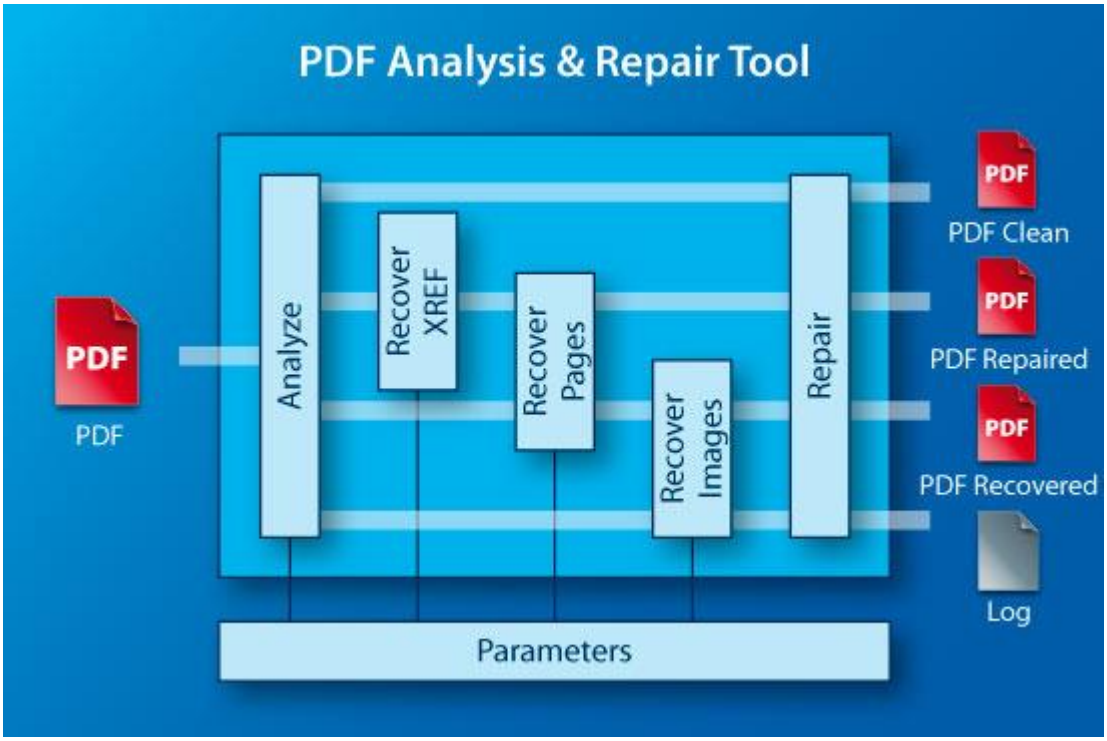
1.1 Description

The 3-Heights™ PDF Analysis & Repair tool is used to analyze, repair and restore the content of corrupt PDF documents.

Unfortunately, the number of corrupt PDF documents is incredibly huge. The cause is usually down to defective generating tools, converters and other influences such as attempts at manual editing, copying via FTP without correct settings, system crashes during PDF creation, network interruptions, defective copying on optical media, etc.

The result leads to an enormous loss of important information and to production downtimes caused by corrupt PDF documents.

The 3-Heights™ PDF Analysis & Repair analyzes PDF documents with regard to PDF specifications. Defective files are automatically repaired as far as possible and unreadable data is restored.



1.2 Functions

PDF Analysis & Repair is used to check and, where indicated, repair PDF documents. Users can determine customized profiles from a broad range of analysis and repair options. An exact and detailed description is issued for each reported error. The tool is also capable of reading and processing encrypted PDF files without any problems.

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Features

Analyze and/or repair one or more PDF documents

Set analysis options, including:

- Objects
- Page tree
- Content stream

Set repair options, including:

- Restore data streams
- Restore fonts
- Restore XRef table
- Restore pages
- Restore images if pages cannot be restored

Display error description for every message, including:

- Type (errors, warnings, information)
- Error code
- Text-based description
- Page number
- Number of events

Write error messages to log file

Read encrypted PDF files

Encrypt restored file and set user authorizations

Differentiate between Repair (corrects the errors in the document) and Restore (recreates the document based on the remaining legible information)

Formats

Input Formats

- PDF 1.x (e.g. PDF 1.4, PDF 1.5, etc.), PDF/A

Target Formats

- PDF 1.x (e.g. PDF 1.4, PDF 1.5, etc.)

Compliance

Standards: ISO 32000 (PDF 1.7)

1.3 Operating Systems

- Windows XP, Vista, 7, 8, 8.1 - 32 and 64 bit

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- Windows Server 2003, 2008, 2008 R2, 2012, 2012 R2 - 32 and 64 bit

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2 Installation

2.1 Begin the Installation Process

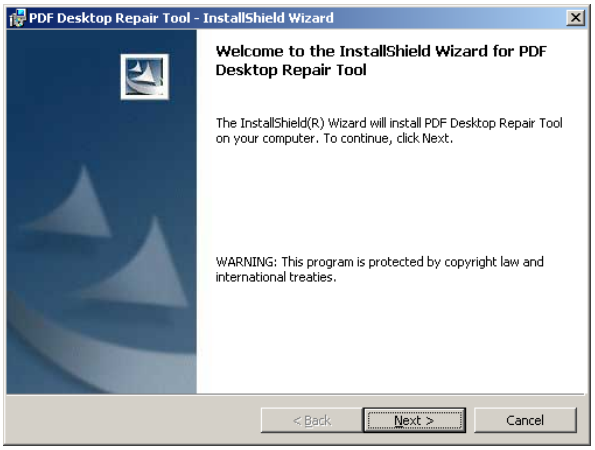
Before installing the 3-Heights™ PDF Desktop Analysis & Repair Tool, please ensure that all previous versions of the tool have been uninstalled.

All software products from PDF Tools AG can be downloaded from the company web site http://www.pdf-tools.com.

Once you have downloaded the setup launcher (**Setup.exe**), double-click on it to begin the installation process. The InstallShield Wizard will open.

You can stop the installation process at any stage by clicking on "**Cancel**".

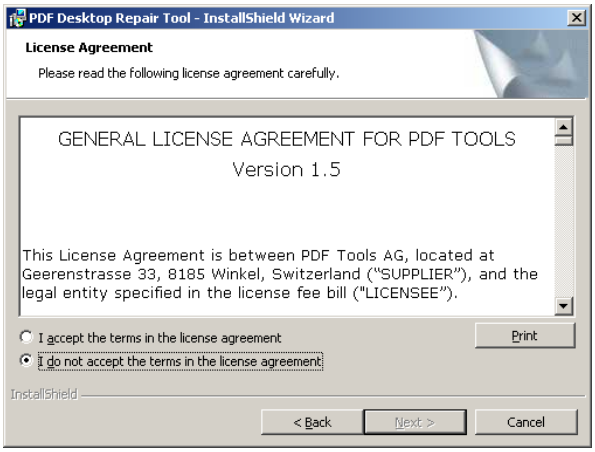
Click on "**Next >**" to start the installation process.


PDF Desktop Repair Tool - InstallShield Wizard
Welcome to the InstallShield Wizard for PDF Desktop Repair Tool
The InstallShield(R) Wizard will install PDF Desktop Repair Tool on your computer. To continue, click Next.
WARNING: This program is protected by copyright law and international treaties.
< Back
Next >
Cancel

2.2 License Agreement

Whether you are installing the production version or an evaluation version of the 3-Heights™ PDF Desktop Analysis & Repair Tool, you must accept the associated license agreement to proceed with the installation. Please read the license agreement carefully. If you do not wish to accept the license conditions, you must stop the installation process at this point.

If you accept the license conditions, press on the "I accept the terms in the license agreement" radio button. Then click on "**Next >**" to proceed.

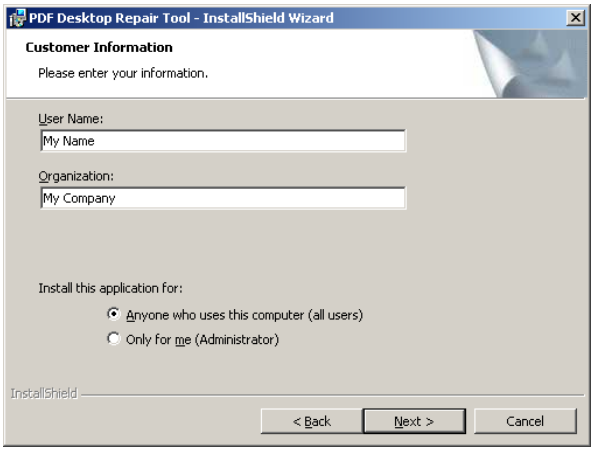

PDF Desktop Repair Tool - InstallShield Wizard
License Agreement
Please read the following license agreement carefully.
GENERAL LICENSE AGREEMENT FOR PDF TOOLS
Version 1.5
This License Agreement is between PDF Tools AG, located at Geerenstrasse 33, 8185 Winkel, Switzerland ("SUPPLIER"), and the legal entity specified in the license fee bill ("LICENSEE").
I accept the terms in the license agreement
I do not accept the terms in the license agreement
Print
InstallShield
< Back
Next >
Cancel

2.3 Customer Information

Please enter your name and your organisation if applicable.

You can now decide if the 3-Heights™ PDF Desktop Analysis & Repair Tool will only be accessible to the currently logged-in user, or for all users who log in to this computer.

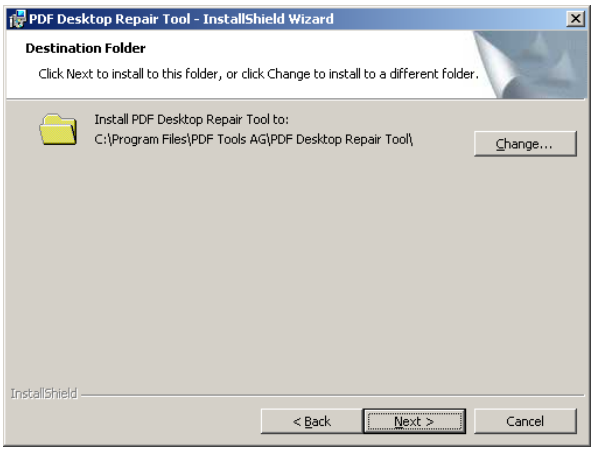
Enter your customer information, then click on "**Next >**" to proceed.



2.4 Program Location

You can select the destination folder for the installation. The default folder is: ..\Program Files\PDF Tools AG\ PDF Desktop Repair Tool\

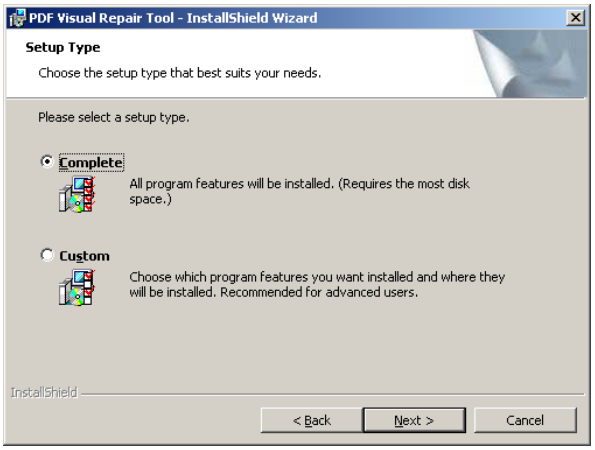
Change the folder if you wish, then click on "**Next >**" to proceed.


PDF Desktop Repair Tool - InstallShield Wizard
Destination Folder
Click Next to install to this folder, or click Change to install to a different folder.
Install PDF Desktop Repair Tool to:
C:\Program Files\PDF Tools AG\PDF Desktop Repair Tool\
Change...
InstallShield
< Back
Next >
Cancel

2.5 Setup Type

Select "Complete" or "Custom" setup. With the custom setup you can opt to not install CJK (Chinese, Japanese and Korean) fonts. This will save approximately 1MB disk space.

Select the setup type, then click on "**Next >**" to proceed.


PDF Visual Repair Tool - InstallShield Wizard
Setup Type
Choose the setup type that best suits your needs.
Please select a setup type.
Complete
All program features will be installed. (Requires the most disk space.)
Custom
Choose which program features you want installed and where they will be installed. Recommended for advanced users.
InstallShield
< Back
Next >
Cancel

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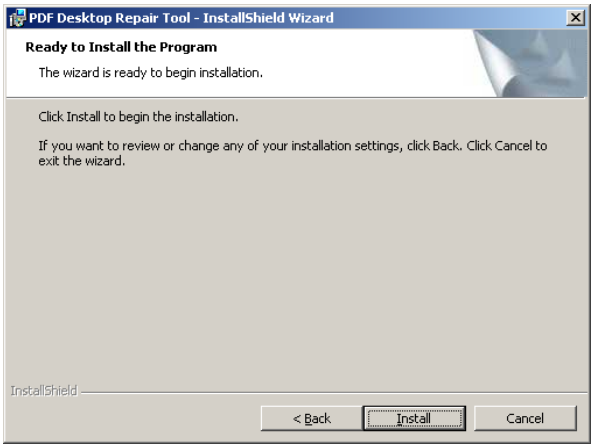
2.6 Install Program

The 3-Heights™ PDF Desktop Analysis & Repair Tool is now ready for installation.

Select "**Install**" to install the program.

A de-install program is included in the installation, with which the repair tool can be removed at a later time if necessary.

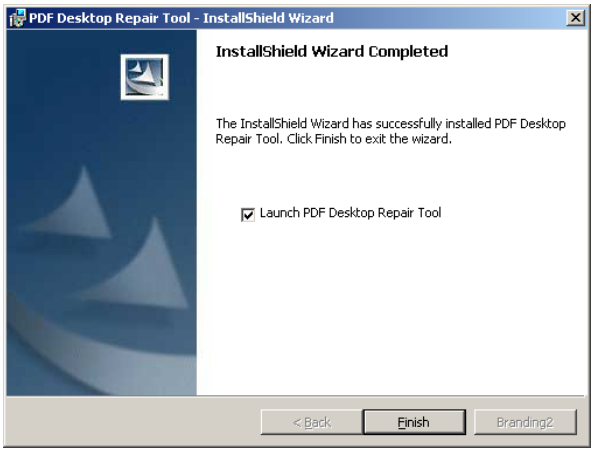

PDF Desktop Repair Tool - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield
< Back
Install
Cancel

2.7 Install Completed

The install process is now completed.

You can launch the 3-Heights™ PDF Desktop Analysis & Repair Tool by marking the check-box and selecting "**Finish**".

Select "**Finish**" to end the installation process and close the InstallShield Wizard.


PDF Desktop Repair Tool - InstallShield Wizard
InstallShield Wizard Completed
The InstallShield Wizard has successfully installed PDF Desktop Repair Tool. Click Finish to exit the wizard.
Launch PDF Desktop Repair Tool
< Back
Finish
Branding2

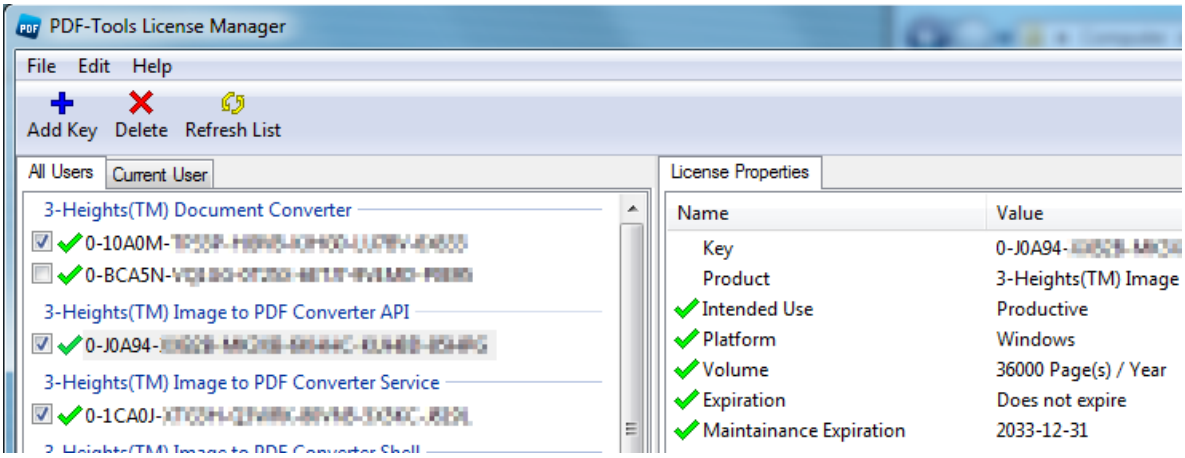
3 License Management

There are three possibilities to pass the license key to the application:

1. The license key is installed using the GUI tool (Graphical user interface). This is the easiest way if the licenses are managed manually. It is only available on Windows.
2. The license key is installed using the shell tool. This is the preferred solution for all non-Windows systems and for automated license management.
3. The license key is passed to the application at runtime via the "LicenseKey" property. This is the preferred solution for OEM scenarios.

3.1 Graphical License Manager Tool

The GUI tool *LicenseManager.exe* is located in the *bin* directory of the product kit.



List all installed license keys

The license manager always shows a list of all installed license keys in the left pane of the window. This includes licenses of other PDF Tools products.

The user can choose between:

- Licenses available for all users. Administrator rights are needed for modifications.
- Licenses available for the current user only.

Add and delete license keys

License keys can be added or deleted with the "Add Key" and "Delete" buttons in the toolbar.

- The "Add key" button installs the license key into the currently selected list.
- The "Delete" button deletes the currently selected license keys.

Display the properties of a license

If a license is selected in the license list, its properties are displayed in the right pane of the window.

Select between different license keys for a single product

More than one license key can be installed for a specific product. The checkbox on the left side in the license list marks the currently active license key.

3.2 Command Line License Manager Tool

The command line license manager tool *licmgr* is available in the *bin* directory for all platforms except Windows.

A complete description of all commands and options can be obtained by running the program without parameters:

```
licmgr
```

List all installed license keys

```
licmgr list
```

The currently active license for a specific product ist marked with a star '*' on the left side.

Add and delete license keys

Install new license key

```
licmgr store X-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
```

Delete old license key

```
licmgr delete X-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
```

Both commands have the optional argument `-s` that defines the scope of the action:

- `g`: For all users
- `u`: Current user

Select between different license keys for a single product

```
licmgr select X-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
```

3.3 License Key Storage

Depending on the platform the license management system uses different stores for the license keys.

Windows

The license keys are stored in the registry:

- HKLM\Software\PDF Tools AG (for all users)
- HKCU\Software\PDF Tools AG (for the current user)

Mac OS X

The license keys are stored in the file system:

- /Library/Application Support/PDF Tools AG (for all users)
- ~/Library/Application Support/PDF Tools AG (for the current user)

Unix / Linux

The license keys are stored in the file system:

- /etc/opt/pdf-tools (for all users)
- ~/.pdf-tools (for the current user)

Note: The user, group and permissions of those directories are set explicitly by the license manager tool.

It may be necessary to change permissions to make the licenses readable for all users. Example:

```
chmod -R go+rx /etc/opt/pdf-tools
```

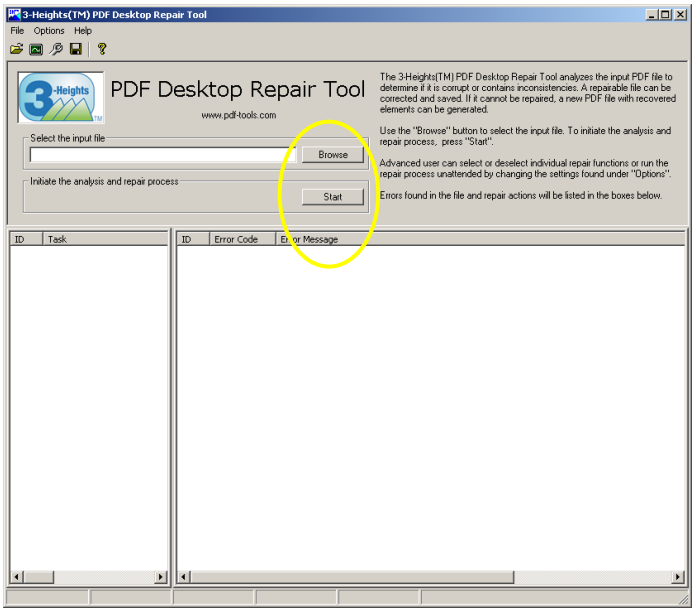
4 Getting Started and User's Guide

To analyse and repair a PDF file, click on **"Browse"** and select the PDF file you want to analyse.

A partial analysis occurs when the file is loaded, to ensure that it can be loaded properly.

When your file is displayed in the Input File field, click on **"Start"** to begin the analysis process.

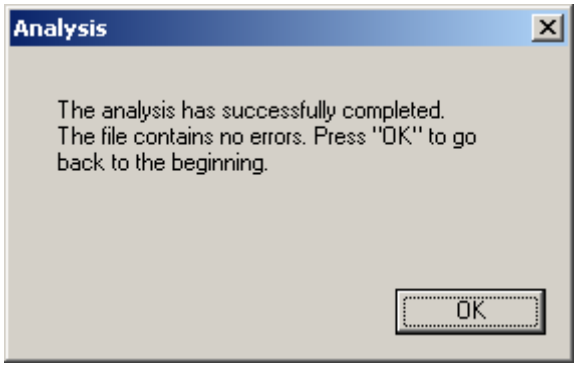
The PDF file will be now be completely analyzed.



4.1 PDF File Contains No Errors

If the analysis determines that the PDF file contains no errors, you will see the following pop-up message.

Select "**OK**" to close the message and return to the main menu.

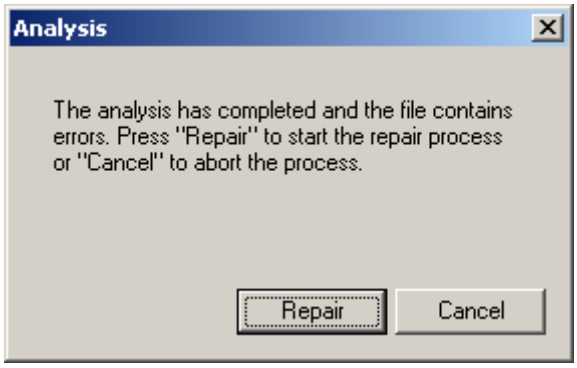


4.2 Repair Process

Start the Repair Process

If the analysis determines that the PDF file contains errors and can be repaired, you will see the following pop-up message.

Select "**Repair**" to begin the repair process or "**Cancel**" to close the message and return to the main menu without repairing the file.

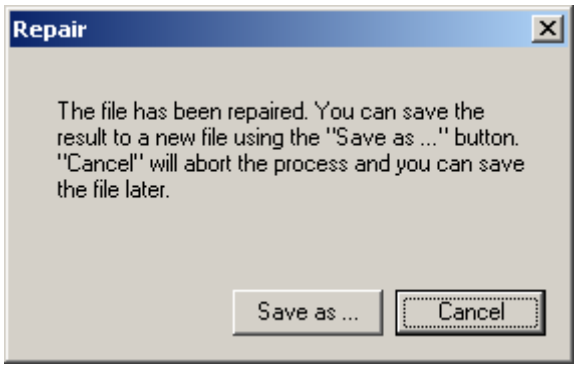

Analysis
The analysis has completed and the file contains errors. Press "Repair" to start the repair process or "Cancel" to abort the process.
Repair
Cancel

Save the Repaired File

Once the file has been repaired, you will be prompted to save the repaired file under a new name. You cannot save the repaired file under the same name as the input file.

Select "**Save as ...**" to save the file or "**Cancel**" to close the message and return to the main menu without saving the repaired file.

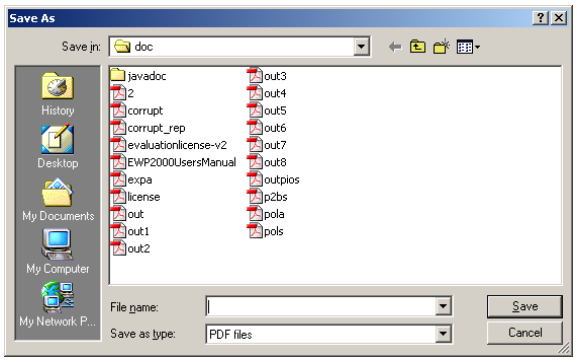
You can save the information at a later time by selecting "File", "Save as.." in the main menu, until you either load a new file or exit the program.


Repair
The file has been repaired. You can save the result to a new file using the "Save as ..." button. "Cancel" will abort the process and you can save the file later.
Save as ...
Cancel

Select the New File Name

Enter the name and location where you want to save the repaired file, then select "**Save**".

Select "**Cancel**" to close the window and return to the main menu without saving the repaired file.

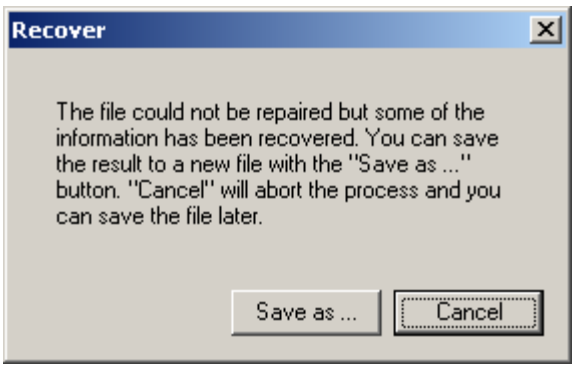


4.3 Recovery Process

Information can still be obtained from a PDF file that is not reparable. The recovery process will recover all recognizable content and save it in a new PDF document.

Start the Recovery Process

If the repair process determines that the document is irreparable, but some content can be recovered, you will see the following pop-up message.


Recover
The file could not be repaired but some of the information has been recovered. You can save the result to a new file with the "Save as ..." button. "Cancel" will abort the process and you can save the file later.
Save as ...
Cancel

Select "**Save as...**" to save the recovered information in a new PDF file. You cannot save the recovery file under the same name as the input file.

Select "**Cancel**" to close the message and return to the main menu without saving the recovered information.

You can save the information at a later time by selecting "File", "Save as.." in the main menu, until you either load a new file or exit the program.

Difference between Repairable and Recoverable

Repairable:	The input PDF file contains errors which are repairable. These are for example PDF syntax errors. In the repaired PDF output file, these errors are fixed.
Recoverable:	The input PDF file is missing data. For example data of an embedded image, which got lost/overwritten when copying the file from one location to another failed partially. When relevant data is lost, the file is irreparable, however the file can be recovered, such that the output PDF is valid according to the PDF Specification.
Example:	Assuming an original PDF (file O) is valid. Somehow the file gets corrupted (-> file C) and file O gets lost. If file O can be rebuild based on file C, then file C is repairable. If a new file N can be built based on file C, and file N is a valid PDF and contains (part of) the content of file O, then file C is recoverable.

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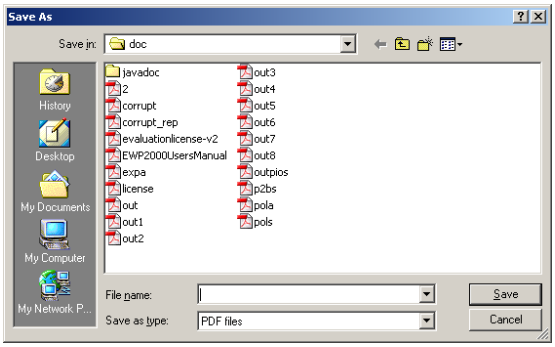
Select the New File Name

Enter the name and location where you want to save the recovery file, then select "**Save**".

Select "**Cancel**" to close the window and return to the main menu without saving the recovery file.

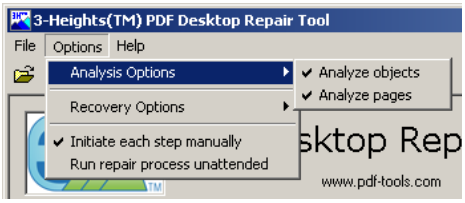


4.4 Repair and Recovery with the Evaluation Version

The evaluation version of the 3-Heights™ PDF Desktop Analysis & Repair Tool analyzes PDF documents and indicates if the documents are valid or if they are corrupt and can be repaired. With the evaluation version the "Save As" function has been disabled. A production version is required to save and view repaired or recovered PDF files.

5 Options

5.1 Analysis Options



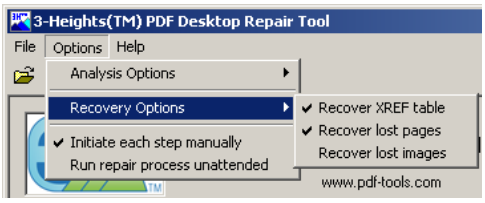
Analyze Objects

The "Analyse Objects" option analyzes all PDF objects in the PDF File to determine if they are correct. If this option is deselected, the PDF objects will be excluded from the analysis and repair process.
Default: *Selected*

Analyze Pages

The "Analyze Pages" option analyses the page tree in the PDF file. If deselected, the page tree will be excluded from the analysis and repair process.

5.2 Recovery Options



Recover XREF Table

This option recovers the cross-reference table. This option can be deselected if it is taking too long to recover a document, since recovering the cross-reference table is very time consuming.

Default: *Selected*

Recover Lost Pages

By default, if pages are not part of the page tree (loose pages), they will be recovered and added at the end of the recovery document. If this option is deselected, the lost pages will not be recovered, and will not be included in the recovery document.

Default: *Selected*

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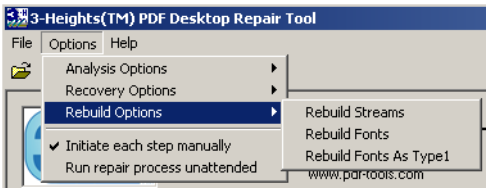
Recover Lost Images

By default, if images are not referenced in the page tree, they will not be recovered but will be excluded from the recovery PDF document. If this option is selected, the lost images will be added at the end of the recovery PDF document.

Default: *Not Selected*

5.3 Rebuild Options



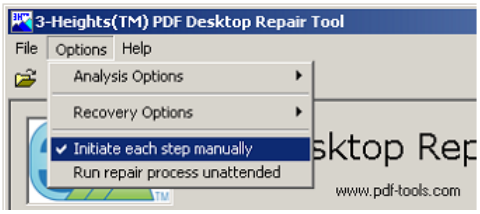
This options controls what parts of the PDF are to be repaired. Available options are:

Rebuild Streams
Rebuild Fonts
Rebuild Fonts as Type1

If "Rebuild Fonts as Type1" is applied, the compressed fonts are decompressed, this can potentially lead to an increase of the file size.

5.4 Process Control

Initiate each step manually



This option allows you to control the analysis and repair process. The user is required to initiate each step in the process manually.

Default: *Selected*

Run Repair Process Unattended

When the repair process runs unattended, the user is not prompted to initiate each step in the process.

If the PDF document is correct, a success message is displayed once the analysis is complete.

If the PDF document was corrupt and is reparable, it will be automatically be repaired. A window then pops-up to enter the desired file name of the repaired PDF file (see

paragraph 3.2.3). You cannot save the repaired file under the same name as the input file.

If the PDF document was corrupt and is not reparable, a window automatically appears to enter the desired file name of the PDF recovery document (see paragraph 3.3.3). You cannot save the recovery file under the same name as the input file.

Default: *Not Selected*

6 Product Limitations

Not all corrupt PDF files are reparable. PDF Tools AG provides no guarantee that a PDF file can be repaired or recovered. In such a case, please inform the originator of the file that the PDF should be created again.

Some image compression methods are not be recoverable. If a PDF file contains images that were compressed with these methods, the program may abort when trying to recover the images.

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